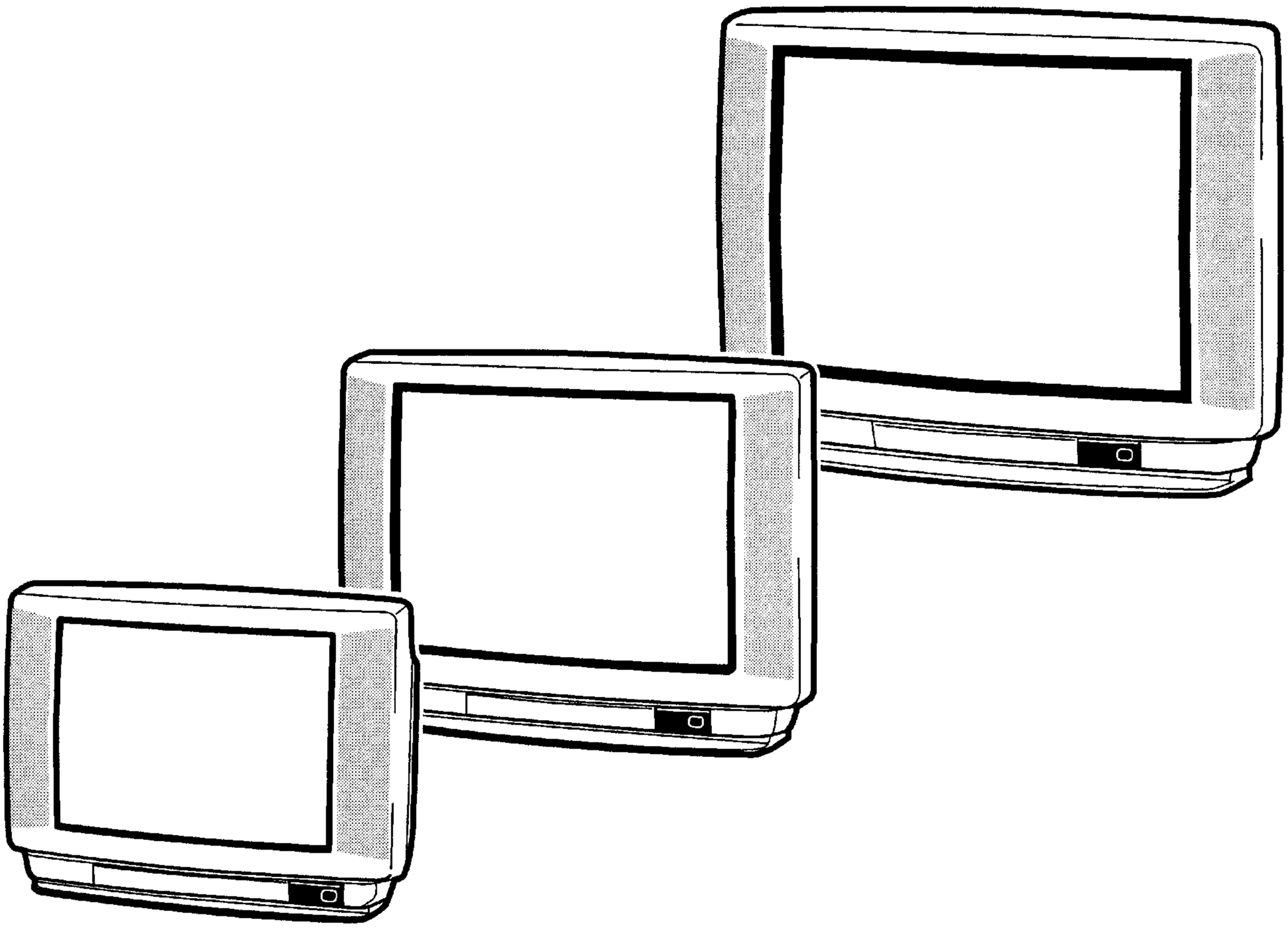
SANYO

INSTRUCTION MANUAL

COLOUR TELEVISION



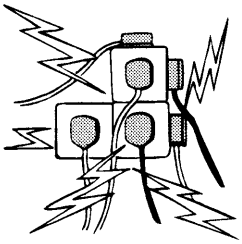
Please read this Instruction book before using your television.

We wish you many hours of pleasure from your new television.

SAFETY PRECAUTIONS

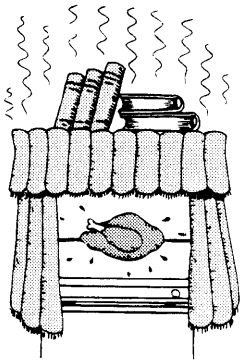
CAUTION: Please read and retain for your safety. This unit has been engineered and manufactured to assure your personal safety. But improper use can result in potential electrical shock or fire hazards. In order not to defeat the safeguards incorporated in this receiver observe the following basic rules for its installation, use and servicing.

Installation

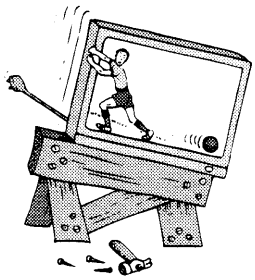


Do not allow anything to rest on the power cord.
Do not locate this television receiver where the cord will be damaged by people walking on it.

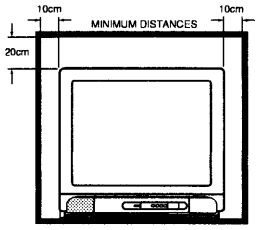
Do not overload wall outlets and extension cords as this can result in fire or electric shock.



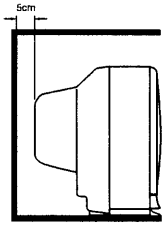
Slots and openings in the cabinet and in the back or bottom are provided for ventilation to ensure reliable operation and to protect it from overheating. These openings **must not** be blocked or covered.
The opening **should never** be covered with a cloth or other material, and the bottom openings **should not** be blocked by placing the television receiver on a bed, sofa, rug, or other similar surface. This television receiver **should never** be placed near or over a radiator or heater.



Do not place your television receiver on an unstable stand, shelf or table. Serious injury to an individual, and damage to the television may result if it should fall. Your sales person can recommend approved stands or shelf and wall mounting instructions.

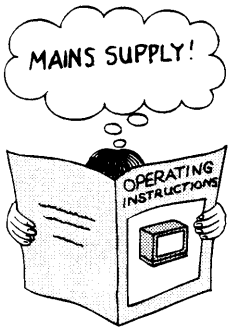


This television receiver should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.

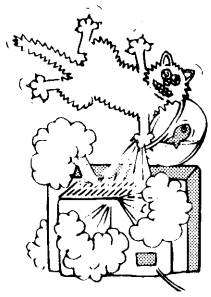


If the television is built into a unit, or enclosed, the minimum distances for ventilation must be maintained. Heat build up can reduce the life of your television, and can be dangerous.

Use

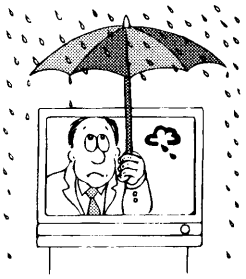


This television receiver should be operated only from the type of power source indicated on the television or as indicated in the Operating Instructions. If you are not sure of the type of power supply in your home, consult your sales person or your local power company.



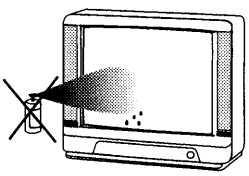
Never add accessories that have not been specifically designed for this television.

Do not drop or push objects into the television cabinet slots or openings. Some internal parts carry hazardous voltages and contact may result in an electrical shock hazard. **Never** spill liquids of any kind on the television receiver.



Do not expose the television receiver to rain or use near water. For example, near a bathtub, kitchen sink, in a wet basement, etc. Before cleaning, unplug the television receiver from the wall socket.

Never stand on, lean on or push suddenly the television or its stand. You should pay special attention to children. Serious injury may result if it should fall.



Do not apply liquid cleaners or aerosol cleaners directly onto the television receiver. Use a damp cloth for cleaning.

INSTALLATION

Mains Supply

The TV set is prepared for a mains voltage AC220~240V, 50Hz. Connect the power cord of the TV set to a wall outlet. When the TV set is not to be used for an extended period of time, it is advisable to disconnect the power cord from the power outlet.

WARNING!
High voltages are used in the operation of this set. Refer service to qualified service personnel.

Important:

This equipment is fitted with an approved non rewireable UK mains plug. To change a fuse in this type of plug proceed as follows:

1. Remove the fuse cover and fuse.
2. Fix a new fuse which should be a BS1362 5Amp A.S.T.A. or BSI approved type.
3. Refit the fuse cover.

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place. If the mains plug contains a fuse, this should have a rating of 5Amp. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5Amp.

Note: The severed plug must be destroyed to avoid a possible shock hazard should it be inserted into a 13Amp socket elsewhere.

The wires in this mains lead are coloured in accordance with the following code:

Blue -------> Neutral
Brown ----> Live

1. The Blue wire must be connected to the terminal which is marked with the letter "N" or coloured BLACK.
2. The Brown wire must be connected to the terminal with the letter "L" or coloured RED.
3. **Do not** connect either wire to the earth terminal in the plug which is marked with the letter "E" or by the earth symbol or coloured GREEN or GREEN and YELLOW.

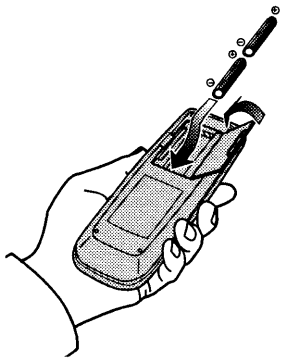
Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead - not simply over the wires.

Aerial Connections

- Insert an aerial plug tightly into the aerial socket on the back of the TV set.
- For all aerial problems please consult your local dealer.
- For the connection to the peripheral AV equipment, refer to section "Connection of AV Equipment" on page 10.

Battery Installation

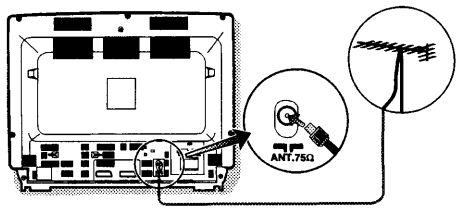
1. Remove the battery cover by sliding it in direction of the arrow.
2. Install two "AA" 1.5 volt batteries so that the "+" and "-" marks on the batteries match the "+" and "-" marks inside the unit.
3. Close the battery cover.



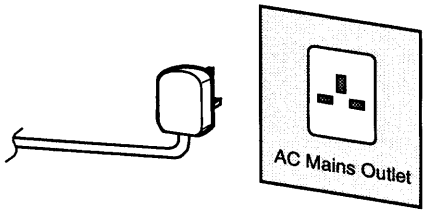
Quick Set Up

This TV set provides a self-automatic tuning function called "Plug & Play". The first time you switch on this TV set, it will automatically begin to search and store all available channels. To ensure that this feature works properly please follow the steps below before you switch on the TV set.

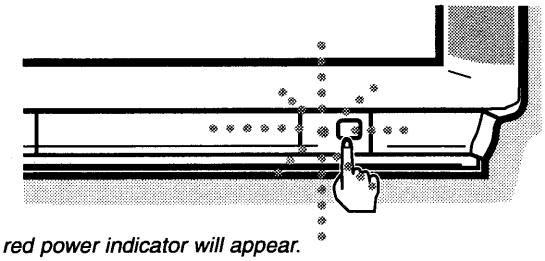
1. Connect your aerial cable socket to the rear of the TV. Don't worry about other AV equipment you should add this later referring to the section "Connecting AV equipment" in this instruction manual.



2. Plug the Mains cable plug into a wall socket.



3. You are now ready to switch on. Simply press the **Mains ON/OFF** switch on the front of the TV set.

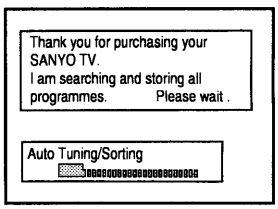


✎ *A red power indicator will appear.*

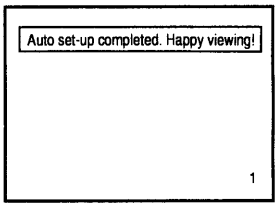
To receive the satellite broadcasting a satellite tuner is required. Before carring out the automatic setting, receive the satellite broadcasting on the satellite tuner.

The self-automatic tuning and sorting system will start as follows:

The tuning status and welcome messages will appear on the screen.



After completing this procedure, the programme position 1 is selected and the ending messages appear on the screen.



To make this message disappear, press any of the control buttons.

Now the installation if completed!

Station allocations
The programme positions 1 to 6 are especially prepared for the following major stations in the UK.

Programme position 1 : BBC1
Programme position 2 : BBC2
Programme position 3 : ITV
Programme position 4 : CH4 or S4C
Programme position 5 : CH5
Programme position 6 : BBC-W(BBC-World) or BBC-P(BBC-Prime)

Programme position 4 is preserved for CH4 or S4C station, and 6 is for BBC-World or BBC-Prime station. If both stations are available in your reception area, the first found station is stored for each specified programme position.

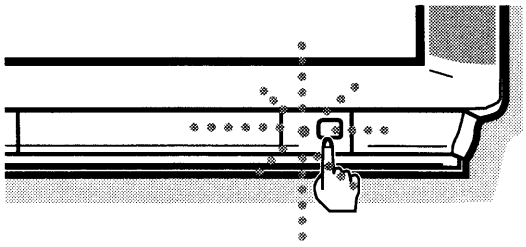
If any of them are not available in your reception area, some programme positions from 1 to 6 will not have a stored station. The remaining stations will be stored from programme position 7 in sequence found.

This procedure only appears the first time you switch your TV set on.

If additional channels become available (you move to another city or cable is installed), please follow the description "PRESETTING" on page 11.

GENERAL OPERATION

Mains ON/OFF



■ To turn the TV set ON, press the **Mains ON/OFF switch**. The power indicator illuminates to show the power is on.

If no picture appears but the power indicator is on, press the ⏻ **button**, **P▲▼**, or **0-9 buttons** as the TV set is in the standby mode.

■ To turn the TV set OFF, press it again.

Standby

■ To turn the TV set into standby mode, press the ⏻ **button**. The power indicator illuminates more brightly.

■ To turn the TV set ON from standby mode, Press any of the following buttons: ⏻ **button, P▲▼, 0 to 9 Numeric buttons.**

In the Standby mode the TV set is still partially powered, this is denoted by the red Standby/Power indicator illuminating more brightly than in Power mode.

The **Mains ON/OFF switch** must be in the ON position before the using remote control transmitter.

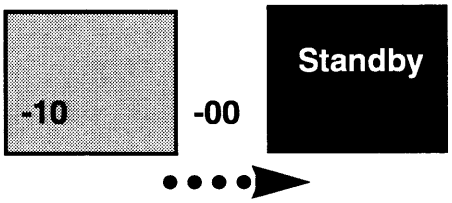
NOTE: It is not possible to turn on with the **Mains ON/OFF switch** from the standby mode.

⚠ Be sure to set the **Mains ON/OFF switch** to the off position, if a power failure occurs while viewing.

⚠ If you found a power indicator flashing, please turn the TV set off completely with the Mains ON/OFF switch and contact our Service desk. This warning is a sign to let you know that the power protection function of this TV set is now operating.

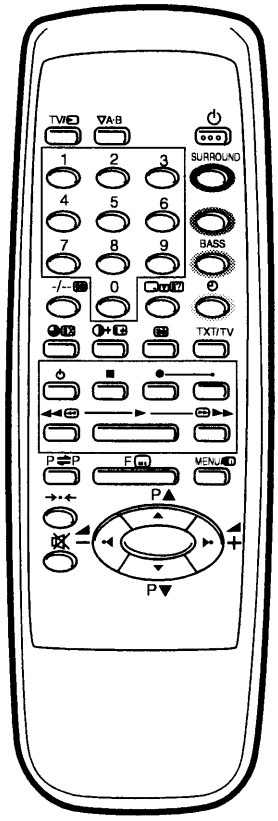
Auto Shut Off

This TV set will automatically switch into the standby mode, 10 minutes after a signal is no longer received. The time until the set will switch off is displayed on the screen.

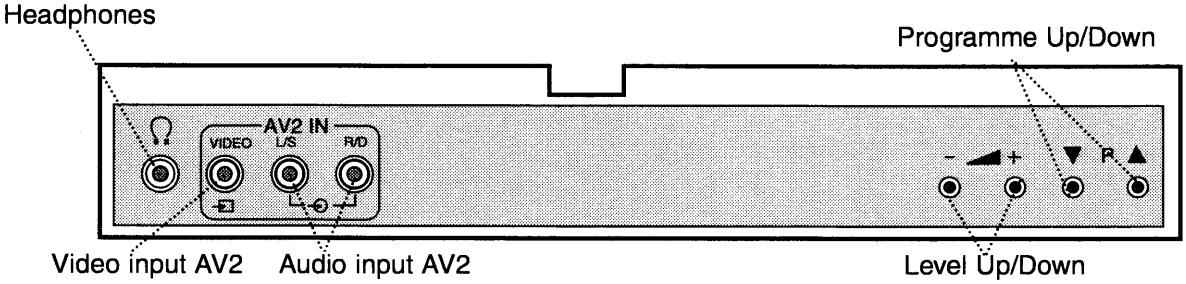


■ If the aerial is removed the TV set will automatically switch into the standby mode after 10 minutes.
■ When the TV set is switched on by using the On-timer function with no signal being received, the auto-shut off function will be ignored.

Controls



⏻	Standby/Power On
▼ P ▲	Programme Up/Down
0-9	0 to 9 Numeric buttons
-/--	Digit
- +◢	Level Up/Down
F	Function
	Sound mute
→●←	Picture setting recall
TV/	TV/AV Selection
P⇌P	Previous programme selection
	Time button
	Programme status
	Time Call
SURROUND	Active 3D Surround
BASS	Bass
MENU	(Not Operative)
▽A•B	Nicam/Billingual switch
◑+	Contrast Plus

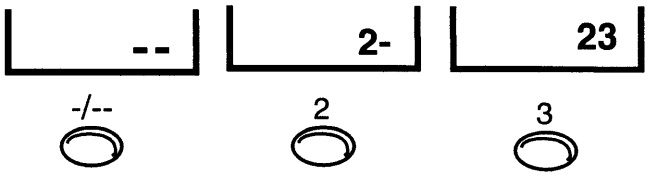


GENERAL OPERATION

Programme Selection

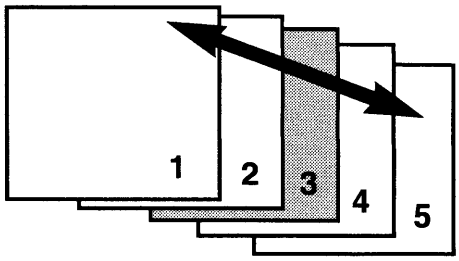
■ **Direct Programme Selection**

For selection of programme position 0 to 9, press the corresponding **numeric button**. If the required programme is equal or more than 10, for example 23, first press the **-/- - button** and enter **2** then **3**.



■ **Up/Down Programme Selection**

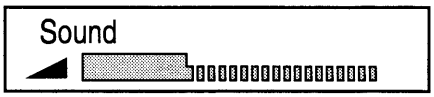
Press the **P▲ button** to increase the programme position.
Press the **P▼ button** to decrease the programme position.



The programme ID (identification) is displayed together with the programme number on the screen automatically when one of the following major stations in the U.K. is selected, BBC1, BBC2, ITV, CH4, S4C, CH5, BBC-World and BBC-Prime stations. For further information see description Automatic Tuning/Sorting on page 11.

Sound & Picture settings

1. To adjust the sound volume, press the **+ / - button.**



2. Select from the following functions: Colour, Bright, Contrast, Sharpness,Text Bright, Fine tuning, Bass, Treble and Balance by pressing the **F button**. Each time the **F button** is pressed, the function display changes as illustrated.

Picture Control

Colour : To adjust the picture colour.
Bright : To adjust the picture brightness.
Contrast : To adjust the picture contrast.
Sharpness : To adjust the picture sharpness.
Text Bright : To select the teletext brightness level of the teletext mode (see page 12).
< > To make fine adjustments to tuning.

Sound Control

Bass : To adjust low frequency sounds.
Treble : To adjust high frequency sounds.
Balance : To equalise the output from the left and right speakers.
Auto Volume: To equalise the volume level. (See page 7).
Child Lock : To lock the control keys on the TV. (see page 8).
Preset No/Yes : To enter the presetting mode. (see page 10).

3. To adjust the level of the selected function, press the **+ / - button**

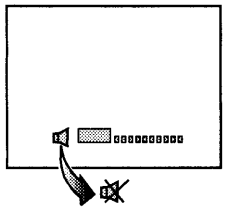
The following functions do not appear in AV mode, Fine tuning, PRESET NO/YES. The function AV1 MODE only appears when in AV1 mode.

Sound Attenuation

This function has two sound mute stages. Press the **button** once, the sound from the speakers will be reduced, press it again and it will be muted completely.

Press the **button** again to swtich the sound back on.

When the **+ / - button** is pressed, the sound attenuation is cancelled.



Personal Picture Preference

This TV provides three picture setting levels at which you can store different preferred picture/sound settings.

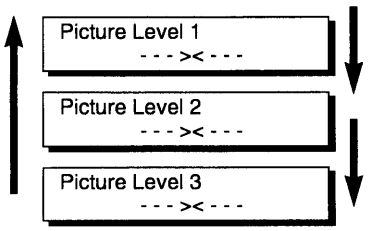
For example you could set up the 3 levels for different viewing conditions as shown below.

Picture Level 1: Normal picture setting

Picture Level 2: Contrast, brightness and colour settings (For when the room is brightly lit).

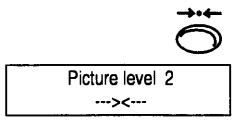
Picture Level 3: Low contrast, brightness and colour setting (For when the room is dimly lit or the lights are switched off).

Press the **→•← button** repeatedly to choose your desired picture level.

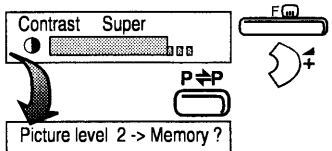


Storing of picture setting

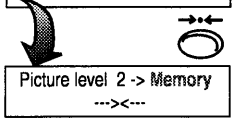
1. Select the picture level which you wish to change by pressing the **→•← button** repeatedly. (eg. Picture level 3)



2. Adjust to your preferred picture levels (see Sound and Picture settings) and then press the **P⇌P button** while the control display is still on the screen. The word "Memory?" appears on the screen.



3. Press the **→•← button** for memorisation. The colour of the word "Memory" will change to red.



Storing is now complete.

What is Active 3D surround?

In traditional stereo sound, left and right channels combine to create a stereo image. Better speakers can create a larger perceived sound stage, so sound seems to emanate from a few feet behind the TV. Sound can have a much wider presence with Active 3D surround technologies. Music and sound effects appear to come from points in the room far from the speakers. Objects (such as jets) seem to move towards and then past the listener, whilst the important channel sound still appears to come from the centre of the screen.

Active 3D Surround Mode

This TV provides an active 3D surround processor which can produce incredible 3 dimensional sound effects when receiving a standard stereo or monaural signal.

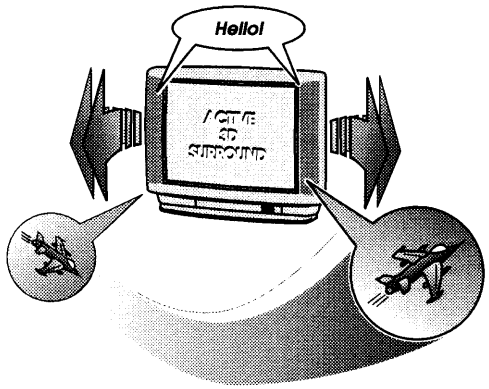
The following 3D surround modes can be selected by pressing the **Surround button**:

Super: This emphasises the 3D surround sound to produce a wider sound effect, similar to listening at a cinema or theatre.

Active: Normal 3D surround sound, set to give the optimum 3D surround effect.

Mono: This mode is specially prepared for Nicam-mono broadcasting. Select this mode, when you can not get the 3D surround effect because the sound is Nicam stereo.

Off: To switch off the 3D surround effect.



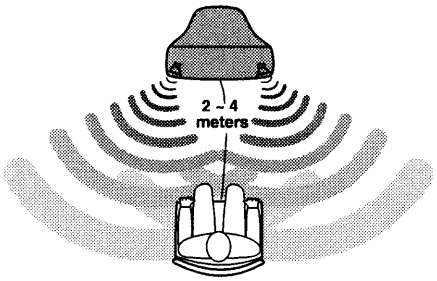
Achieving the optimum 3D surround effect

Optimum positioning

Sit at a distance of approximately 2 to 4 meters from the TV set.

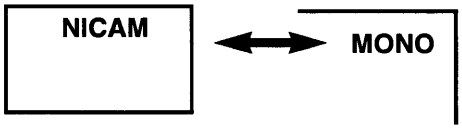
Listen facing the centre of the TV set.

Remove any obstructions between you and the TV set.



Nicam & Billingual Reception

Nicam Sound Reception
If the TV receives Nicam programs, it automatically switches to nicam sound reception. The word "Nicam" appears on the screen briefly.

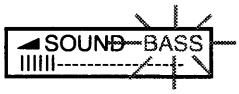


Bilingual reception
Press the **▽A•B button** repeatedly to select language A or B when the TV channel transmits in 2 languages (dubbed or orignal language). A or B appears briefly on the screen.

If nicam sound reception is poor in quality, you can switch to "Mono" sound reception by pressing the **▽A•B button.**

Bass Expander

To get a emphasis bass sound, press the **BASS button**. The word "BASS" appears on the sound display.



Auto volume level

Sometimes we notice the volume level is different between the receiving sources, such as on-air programs and VCR playback, channels, and programmes and commercials. When this function is set to "Yes" the TV set automatically equalises the volume level difference to make a standard volume level.

1. Press the **F button** repeatedly until the word "Auto Volume" appears on the screen.
2. Select "Yes" or "No" by pressing the **+ / - button**.

Contrast plus

This TV provides two kinds of contrast modes. You can choose "Super" or "Natural" by pressing the **◑+ button**.

Super: High contrast mode, suitable viewing in brightly lit rooms.

Natural: Normal contrast mode, suitable for viewing in dimly lit rooms.

OTHER FUNCTIONS

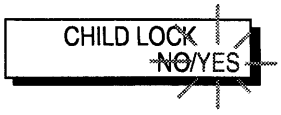
Child Lock

This TV has a child lock function which inhibits the use of the buttons on the front of the TV set. With this you can prevent small children unexpectedly pressing buttons.

Setting the Child Lock Mode

Press the **F button** repeatedly until the word "CHILD LOCK" appears on the screen.

Next select "YES" by pressing the **+ / - buttons.**



The TV set is now in the child lock mode.

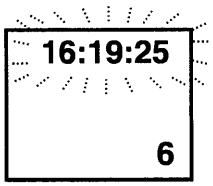
Cancelling the Child Lock mode

Follow the procedure above but select "NO" by pressing the **+ / - buttons.**

NOTE: The child lock mode is cancelled when the TV is switched off with the mains ON/OFF switch.

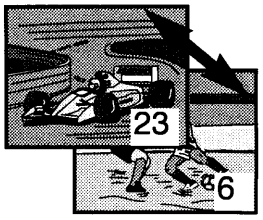
Time Call

In the TV mode, if the receiving programme has a teletext service when the **button** is pressed, the present time will be displayed on the screen for 5 seconds.



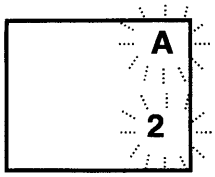
Alternative Programme

Press the **P⇌P button** and the TV set will alternately select the current programme position and the previous programme position viewed.



Recall

To display the on-screen indications, press the **button**. The display disappears after five seconds.



VCR Use

This remote control transmitter has been designed to be used in conjunction with selected **SANYO VCR's**. Some SANYO VCR's may have their own functions, so please refer to the individual instruction booklet when using this remote control to ensure compatibility.

⏻ POWER On/Off :
Use to turn VCR power on and off.

▶ PLAY :
Use to playback the tape.

■ STOP :
Use to stop the movement of the tape.

▶▶▶ FAST/CUE :
Use to advance the tape at fast speed, or in order to playback the tape at fast speed.

◀◀◀ REWIND/REVIEW :
Use to rewind the tape or in order to playback the tape in reverse at fast speed.

●——• RECORD :
Use to record on the tape. Press both of the buttons at the same time.

OTHER FUNCTIONS

Timer Setting

This TV has a timer function which will switch your TV on and display the time up sign on the screen at a desired time and switch off after a preset period of time. Select the following modes by pressing the ◕ **button** repeatedly.

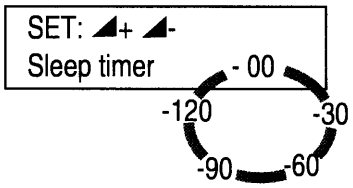
- **Sleep timer setting** You can select a time period from which the set will switch into the standby mode.
- **On timer setting** You can set a time period from which the set will switch on from the standby mode.
- **Alarm timer setting** You can set a time which you want to display the time up sign on the screen.

Sleep Timer Setting

1. Press the ◕ **button** once, the word "SLEEP TIMER" will appear on the screen.
2. Set the time period by pressing the ◢ **+ /** ◢ **- button**. The display changes in 30 minute steps.

If you have set a time, then one minute before the TV switches off the remaining minute (-1) automatically appears on the screen.

To cancel the sleep timer, select "-00" by using the above procedure.



On Timer Setting

1. Press the ◕ **button** twice. *The words "ON TIMER" will appear on the screen.*
2. Set the time period by pressing the ◢ **+ /** ◢ **- button**.

When you press the ◢ **+ /** ◢ ***- button**, the time always steps up, hold it down and the time changes more rapidly.*

When you press the ◢ **+ /** ◢ ***- button** once, the present clock time will be call up for easier setting.*

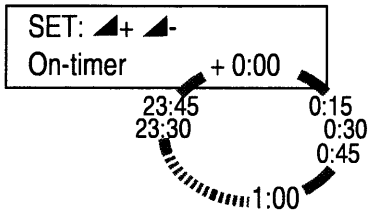
This completes the on-timer setting.

3. Switch into the standby mode by pressing the ⏻ **button**.

When it reaches the set on-time, the TV set will switch on and select the start-up programme automatically.

When the TV set is switched on by using the on-timer function, the TV set will automatically switch into the standby mode in 2 hours if no key control is input.

The programme position at which the TV set will switch on by using the on-timer function is the last watched position.



Alarm Timer Setting

This function can display the time up sign on the screen as illustrated to let you know that the time has come when the set alarm time is reached. This only happens when the TV is on. This may remind you to do something.

1. Press the ◕ **button** twice. *The words "ALARM TIMER" will appear on the screen.*
2. Set the time period by pressing the ◢ **+ /** ◢ **- button**.

When you press the ◢ **+ /** ◢ ***- button**, the time always steps up and hold down it, the time changes more rapidly.*

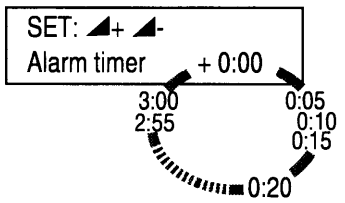
When you press the ◢ **+ /** ◢ ***- button** once, the present clock will be call up as the on-time for easy setting.*

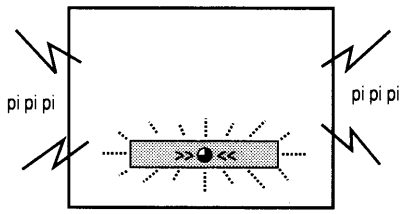
This completes the alarm timer setting.

When it reaches the set alarm time, the time up sign will appear on the screen and this is kept on the screen until a key control is entered.

If the TV set is switched off by the Mains Switch ⏻ or a power failure occurs, the timer settings will be cancelled.

You can confirm the remaining time for each timer mode by pressing the ◕ **button.**



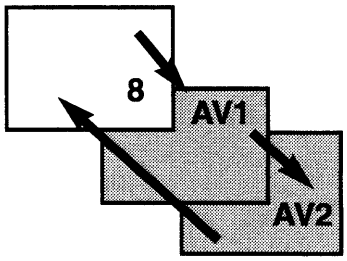


Using AV Equipment

You can connect a VCR, S-VHS VCR, Satellite Tuner, PAY TV Decoder or Camcorder, as this TV has two Scart terminal on the rear panel and one pair of AV input terminal on the front panel.

● Selection of AV mode

Most AV equipment will automatically switch to the AV mode (because of the 8 pin function signal) by pressing the PLAY button on your AV equipment. If not, press the **TV/⊏ button** to select the desired AV mode manually.



● Use of front AV2 terminal

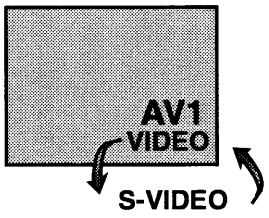
This TV provides one pair of AV input terminals on the front panel. It is very convenient for using a game or comcorder connection.

AV equipment can be connected to either the rear AV2 scart socket or to the front AV2 RCA sockets. If equipment is connected to the front AV2 terminals this will override equipment connected to the rear AV2 scart socket. To use the rear AV scart socket please ensure that no equipment is connected to the front AV2 terminals.

● Setting of AV1 input mode

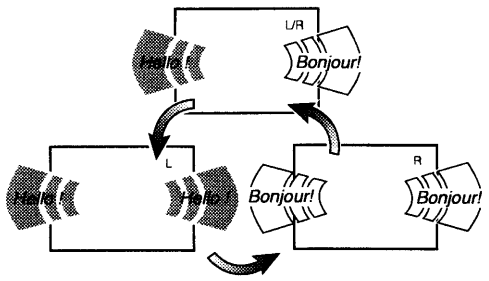
If you want to use a VCR which is equipped with the S-VHS capability to obtain the best performance, you should connect the AV1 terminal and select the S-Video mode in the AV1 mode.

1. Select the AV1 mode by pressing the **TV/⊏ button**.
2. Press the **F⊡ button** repeatedly until the word "AV1 MODE" appears on the screen.
3. Select the correct input mode by pressing the **◢ + / ◢ - button.**



● Selection of the sound track from the equipment

By pressing the **▽A•B button** repeatedly, you can select the sound track L (left), R (right) or L/R from the equipment connected to the scart terminals or the front AV terminal.



The following are our recommended standard connections for AV equipment. There are various types of connections depending on the equipment which you have or its use. For further information please consult your local dealer. If you have a S-VHS type VCR, to obtain the best performance it should be connected to the AV1 terminal which has been specially designed for S-VHS.

USE OF A VCR

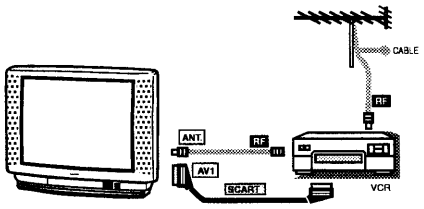
Connection

✔ Connect RF cables. Roof aerial to VCR & VCR to TV.
✔ Better picture quality can be obtained if you also connect a Scart cable.

Ability

✔ Watch TV and cable TV programmes.
✔ Watch the playback from the VCR on position 0 *or when using a Scart cable, it is on AV1 mode.*
✔ Record TV and cable TV programmes.

When you connect the VCR to the aerial terminal on the TV using an RF cable, it is advisable to tune the VCR channel to the programme position 0, this is usefull position for VCR use.



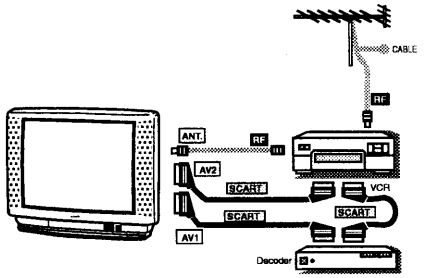
USE OF VCR AND SATELLITE TUNER

Connection

✔ Connect RF cables. Roof aerial to VCR & VCR to TV, Dish aerial to satellite.
✔ Connect Scart cables. AV1 to VCR & AV2 to Satellite Tuner & VCR to Satellite.

Ability

✔ Watch TV programmes.
✔ Watch Satellite programmes on AV2 mode.
✔ Watch the playback from the VCR on AV1 mode.
✔ Record TV and Satellite programmes.



USE OF CAMCORDER OR GAME EQUIPMENT

Connection

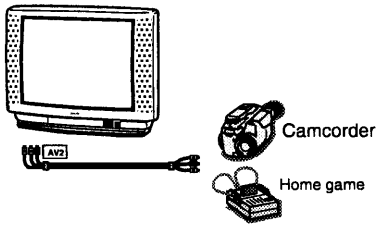
✔ Connect an RCA cable from the front AV terminal(AV2) to a camcorder or to game equipment.

For monaural units, connect the sound cable to the L-socket.

Ability

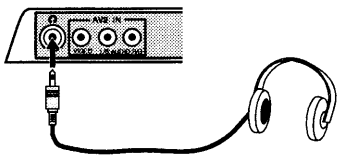
✔ Watch the playback from the camcorder or enjoy playing games on AV2 mode.

You must select the AV2 mode manually.



USE OF HEADPHONES

The 3.5mm mini-stereo jack socket located behind the door of the TV can be used for headphone. When the headphones are inserted the sound from the TV speakers are muted.



PRESETTING

Up to 100 broadcast stations in your reception area can be stored in the electronic memory. There are three ways of presetting modes:

■ Automatic tuning/sorting
All receivable channels are automatically found and stored and the programme positions 1 to 6 are especially prepared for the following major stations in the UK.

Programme position 1 : BBC1
Programme position 2 : BBC2
Programme position 3 : ITV
Programme position 4 : CH4 or S4C
Programme position 5 : CH5
Programme position 6 : BBC-W(BBC-World) or BBC-P(BBC-Prime)

Programme position 4 is preserved for CH4 or S4C station, and 6 is for BBC-World or BBC-Prime station. If both stations are available in your reception area, the first found station is stored for each specified programme position.

■ Semi-automatic presetting
Use to preset a receivable channel in any desired programme position, e.g. BBC1 at position 1.

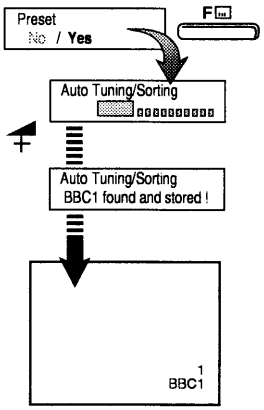
■ Manual presetting
Manually tune a channel if it cannot be automatically tuned, such (when signal is poor).

Automatic tuning/sorting

1. Press the **F button** repeatedly until the word "PRESET NO/YES" appears on the screen.

2. Select "YES" by pressing the **+ button**. Press the **F button** once to select the automatic presetting mode. The words "Auto tuning/sorting" appears on the screen.

3. Press the **+ button** to begin automatic tuning and sorting.



The automatic tuning/sorting operation can be cancelled at any time by pressing the **F button.**

After all receivable channels have been found and stored, the TV set automatically returns to programme position 1.

If any of them are not available in your reception area, some programme positions from 1 to 6 will not have a stored station. The remaining stations will be stored from programme position 7 in sequence found.

If you select "Yes" but do not press the **F button** within 5 seconds in step 2, the mode automatically returns to the normal TV mode.
The automatic tuning/sorting function may not operate properly under the following condition.

The reception of a weak signal condition.
The reception of a station which does not have a teletext service.

You can change the order of a stored station, by using the Channel swapping function.

Semi-automatic or Manual tuning

1. Press the **F button** repeatedly until the word "PRESET NO/YES" appears on the screen.

2. Select "YES" by pressing the **+ button**. Press the **F button** repeatedly to select Semi-automatic or manual presetting mode. The word "SEMI Auto Tuning" or "Manual Tuning" appears on the screen.

3. Press or hold the **+ / - button** to start searching.

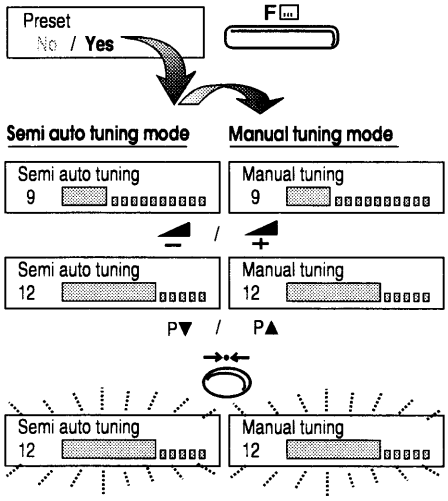
4. When you tune your desired channel, select a programme position where you wish the station to be stored using the **P▲▼ buttons**.

5. Press the **→•← button** to store in the memory.

This completes the presetting.

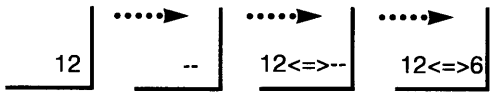
Repeat steps 3 to 5 for other desired channels

To return normal TV mode, press the **F button** twice.



Channel Swapping

Use this channel swapping feature to swap the channels between two stored programme positions. This feature is particularly useful after automatic presetting.



1. Select one of the TV channels you wish to swap by using the **P▲, P▼** or using the **(0-9) numeric buttons**.

2. Press the **-/-- button**. "--" appears on the screen. Press the **P⇌P button**. Channel swapping mode is displayed.

3. Enter other programme number by using the **(0-9) numeric buttons** with two digit numbers.

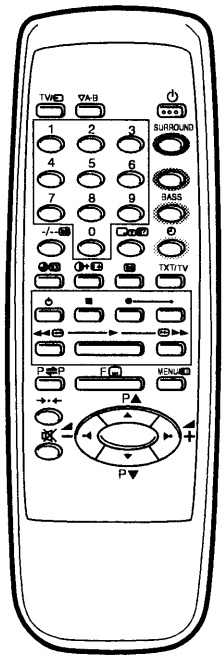
For example:
Selection of programme position 6, first enter **0** and then enter **6**.
Selection of programme position 25, first enter **2** and the enter **5**.

The two TV channels will now have changed places.

Repeat steps 1 to 3 for all other TV channels you want to swap.

The above procedure must be done while the on-screen display is still on the screen.

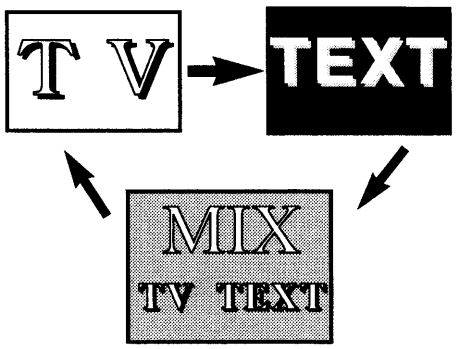
Teletext Controls



TXT/TV	TEXT/MIX/TV SWITCH
0 - 9	0-9 Numeric Buttons
▼P▲	Page Up/Down
	Index page selection
	Hold
	Size
	Cancel
-/--	Sub page button
	Reveal
	Red
	Green
	Yellow
	Blue

Switching to the Teletext mode

Press the **TXT/TV button**, and the screen changes as illustrated.



Picture & Sound in teletext mode

Picture and Text brightness controls in the teletext mode.
You can not adjust the picture or teletext brightness in the teletext mode. You must first switch back to the TV mode and then adjust the picture control or set the teletext brightness level.

How to set the teletext brightness level

1. Press the F button repeatedly in the TV mode until the word "TEXT BRIGHTNESS" appears on the screen.
2. Press the + / - button to select one of the 3 teletext brightness levels either MAXIMUM, CENTRE or MINIMUM.
3. Confirm the selected teletext brightness level by switching to the teletext mode by pressing the **TXT/TV button**.

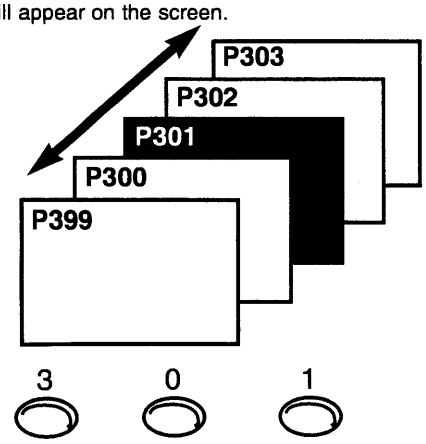
Sound control in the teletext mode.

Only sound volume and muting can be controlled in the teletext mode but the on-screen display will not appear.

Page Selection

■ **Direct page access**

A page can be selected with the **0-9 Numeric buttons**. eg. To display page 301, press buttons 3, 0 and then 1. The selected page number will appear on the screen.



■ **Up/down page access**

When a page is displayed on the screen and you want to read the following page number, press the up (**P▲**) **button** instead of selecting the new page number. To read the previous page, press the (**P▼**) **button**.

P▲ : P301 → P302 → P303 .... P399 → P300 ....
P▼ : P301 → P300 → P399 → P398 ....P301 ....

Hold the button for rapid page change.

Coloured Page Access

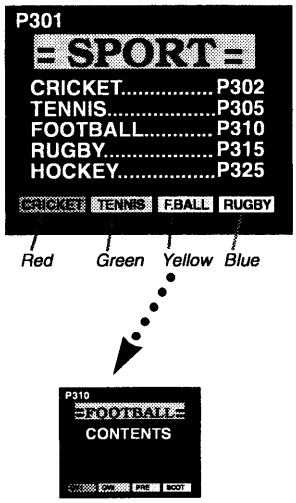
Depending on the TV channel, teletext is transmitted in different systems. The system utilised can be recognised by the coloured line at the bottom of the screen.

Press one of the **4 coloured buttons** to select the topics shown at the bottom of the text screen.

For example the Red topic can be selected using the **Red button**, the Blue topic by the **Blue button**, and so on forth with the other colours.

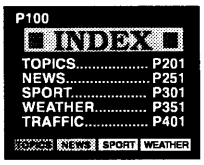
When the teletext service is not transmitting with the FLOF, 4 coloured page numbers will appear at the bottom of the screen instead of the topics.

You can select the previous viewed pages up to 4 pages, by pressing the **P⇌P** ***button repeatedly.***



Index Page Selection

Press the **button** to select one of the teletext index pages.



Hold

Press the **button** to stop sub pages changing. The word "HOLD" will appear instead of the page number.

Some teletext pages are made up of several sub pages. These sub pages are automatically changed. Sub page is shown as P4/8 (sub page 4 of 8 pages) the location on the text page depends on the text service.

Sub Page Access

When the teletext information is longer than one page, it may take some time to reach the required page which is automatically changed. By using the sub-coded page access, you can continue watching the TV picture until the sub-page is reached.
Select a teletext page with sub pages.

1. Press the **button**. The characters "**S******" will be displayed on the top left corner of the screen.

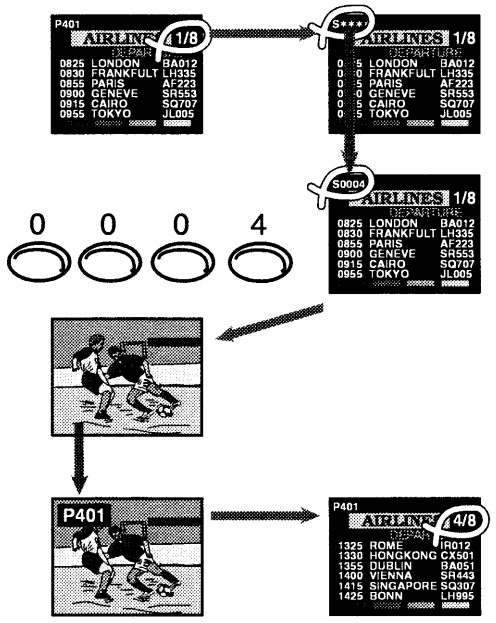
2. Enter the sub page number by using the **(0-9) buttons**.

For example, to enter the sub page 4, press buttons 0, 0, 0 and 4.

3. Press the **button** to return the normal TV picture.

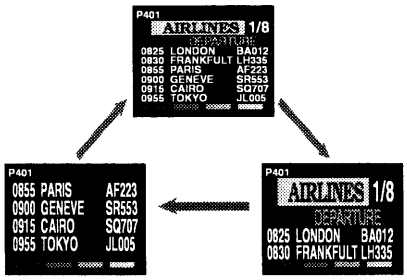
Immediately the requested sub-coded page is found, the page number will appear over the TV picture.

4. Press the **TXT/TV button** to view the sub-coded page.



Double Letter Height

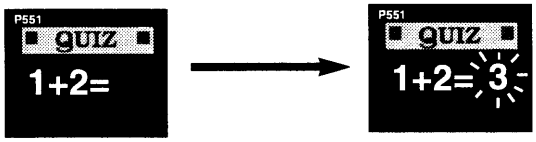
Either the top half or the bottom half of the page can be expanded to fill the whole screen by pressing the **button**. Each time the button is pressed, the display changes as illustrated.



Displaying Concealed Information

Press the **button** to reveal hidden items on the text page.

Some pages such as quiz pages have the answers hidden. The button may have to be held to keep the answer on the screen, or pressed again to remove the answers.



Updated Pages

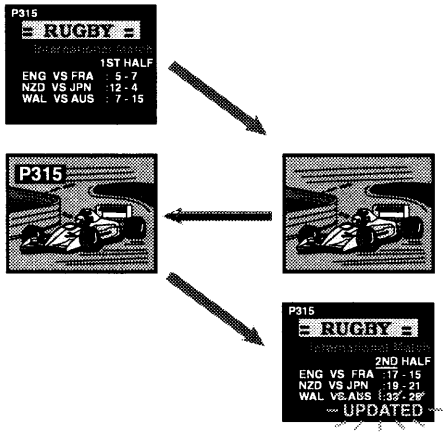
There are teletext pages which are updated as events progress, such as sports results, news reports or traffic information. Select a page which will be updated.

1. Press the **button** to return to the normal TV picture.

   Immediately the selected page is updated, the page number will appear over the normal TV picture.

2. Press the **TXT/TV button** to view the updated page.

Note: If the page has sub pages the number will appear when the sub page is changed.



● Cancel

When you press the button, the TV picture appears on the screen. Whilst in this mode you can not select another TV programme. You should first switch back to TV reception by pressing the **TXT/TV button** if required.

● Teletext reception

If your aerial signal is poor, the teletext reception may be poor.

SPECIAL FUNCTIONS & SPECIFICATIONS

Special Functions

This TV set allows you to set up the following special functions.

1. Press and hold the **button** on the **Remote control handset** and then press the **P▲ button** on the **TV set**.
2. To select the "ITEM" number, press the **F button** on the **remote control handset**.
3. To select the "SET" number,press the **+ / - button** repeatedly.
4. To return to the normal TV mode, press the **button**.

■ Maximum volume setting and prohibition of presetting

ITEM 1 Sets the current volume as the maximum volume level and prohibitation of preset function.

SET→ 0 NO SET→ 1 YES

■ Start up programme position

ITEM 2 Presets the programme position when the set is switched on.

SET→ 0 Last programme position start
SET→ 1 Programme position "1" start
SET→ 2 Programme position "2" start
SET→ 3 Programme position "3" start
SET→ 4 Programme position "4" start
SET→ 5 Programme position "5" start
SET→ 6 Programme position "6" start
SET→ 7 Programme position "7" start
SET→ 8 Programme position "8" start
SET→ 9 "AV1" start

The setting conditions of all items can be confirmed.

Special functions are not cancelled if the TV set is switched off or the mains disconnected.

TV Specifications

	Common Specification
Power source	AC 220~240V, 50Hz
Television system	System I
Colour system	PAL Modified NTSC in AV mode
Receiving channel	UHF: 21~69
Aerial input impedance	75 ohm
AV terminal	
21-Pin SCART Terminal	AV1 : CENELEC Standard(RGB/S-Video inputs) AV2 : CENELEC Standard
Front AV Terminal	AV2 : RCA Terminal, Video and Audio (L/R) Input
Sound output (Music)	6 watts (CE21DN3-B) 12 watts (CE25DN3-B) 12 watts (CE28DN3-B)
Picture tube (Diagonal)	59 cm (CE21DN3-B) 63 cm (CE25DN3-B) 70 cm (CE28DN3-B)
Visible picture (Diagonal)	55 cm (CE21DN3-B) 59 cm (CE25DN3-B) 66 cm (CE28DN3-B)
Dimensions (W x H x D mm)	610 x 479 x485 (CE21DN3-B) 680 x 543 x 446.5 (CE25DN3-B) 736 x 595.5 x 500 (CE28DN3-B)
Weight	21 Kg (CE21DN3-B) 26 Kg (CE25DN3-B) 31.6 Kg (CE28DN3-B)

Specification subject to change without notice.

Scart Specifications

The specification of the 21 pin connector is as follows.

AV1 Terminal

Pin		
1	Audio output (R-Channel) *3	0.5V/ 1 K ohm
2	Audio Input (R-Channel)	0.5V/10 K ohm
3	Audio output (L-Channel) *3	0.5V/ 1 K ohm
4	Audio earth	
5	Earth (blue)	
6	Audio Input (L-Channel)	0.5V/10 K ohm
7	Blue (B) input *1	0.7Vpp/75 ohm
8	Remote switch input	L:0-2V H:10-12V
9	Earth (green)	
10		
11	Green (G) input *1	0.7Vpp/75 ohm
12		
13	Earth (red)	
14	Earth	
15	Red (R) *1 (or chrominance input) *2	0.7Vpp/75 ohm
16	Fast blanking *1	L:0-0.4V H:1-3V
17	Earth(video)	
18	Earth	
19	Video output *3	1 Vpp/75 ohm
20	Video/sync. *1 (or luminance input) *2	1 Vpp/75 ohm
21	Connector shield	

*1 AV2 terminal does not provide RGB inputs
*2 AV2 terminal does not provide S-Video inputs
*3 AV1 terminal outputs TV output. AV2 terminal outputs the monitor output.

SERVICING & HELPFUL HINTS

Servicing

Your television is fully transistorised and does not contain any user serviceable components.

Removal of the cabinet cover may expose you to dangerous voltages. Refer all servicing to qualified service personnel.

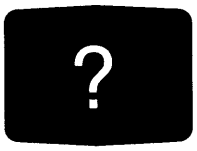
Unplug the television receiver from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- If the power cord or plug is damaged.
- If liquid has been spilt into the television receiver.
- If television receiver has been exposed to rain or water.
- If the television receiver has been dropped or the cabinet has been damaged.
- If the television receiver exhibits a distinct change in performance.
- If the television receiver does not operate normally by following the operating instructions.

Adjust only those controls that are covered in the operating instructions as improper adjustment of other controls may result in damage. This will often require extensive work by a qualified technician to restore the television receiver to normal operation.

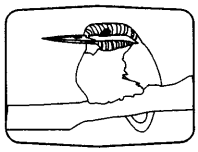
When replacement parts are required, have the service technician verify that the replacements he uses have the same safety characteristics as the original parts. Use of manufacturers specified replacements can prevent fire, shock or other hazards

Helpful Hints

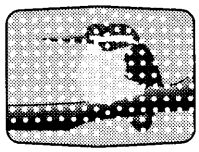


■ **NO PICTURE, NO SOUND**
- Check if TV is plugged in.
- Try a different channel, if OK, probably station trouble.

■ **POOR PICTURE, SOUND OK**
- Adjust BRIGHTNESS control.
- Adjust FINE TUNING control.
- Check aerial connections.

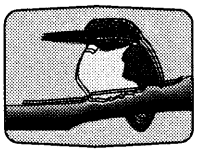


■ **NO COLOUR, PICTURE OK**
- Adjust COLOUR control.
- Adjust FINE TUNING control.
- Is the programme in colour ?



■ **WEAK PICTURE**
- Check aerial connections on back of set.
- Check aerial for broken wires.
- Re-orient aerial.

The following faults are not caused by the receiver:



"GHOSTS"
Reflections of signals from mountains or high buildings will cause multiple images, called "Ghosts". These abnormal conditions can be reduced to minimum by repositioning aerial or by installing new one suited for your area.

"INTERFERENCE"
Interference may be caused by electrical appliances, car ignition systems, etc. This should normally be a temporary condition, but should this interference persist, contact your dealer.

WARRANTY TO CUSTOMER

Sanyo U.K. Sales Ltd. (the company) warrants to the initial retail purchaser that if this equipment is or becomes defective and that, in the opinion of the Company, the defect is due to faulty material or workmanship the Company will, for a period of 12 calendar months from the date of sale to the original purchaser repair or replace, at its sole option, free of charge, any such defective component part of the equipment, always provided that:-

1: The equipment has at all times been used in accordance with the operating instructions issued by the Company, and has not been connected to an electrical mains supply for which it has not been adjusted.

2: Accidental damage or damage caused by negligence of misuse by the user, is specifically excluded.

3: Unauthorised repairs, or any modification to the equipment which has not been expressly approved by the Company, shall render this warranty null and void.

4: Failure due to fair wear and tear of any item is specifically excluded.

This warranty is not transferable and is only applicable within the United Kingdom (and the Republic of Ireland).

Nothing in this express warranty affects the statutory rights available to the purchaser of this equipment.

Note: This warranty supersedes any other form of guarantee that may inadvertently have been enclosed with or attached to the product.

Dear Customer.

Thank you for buying *SANYO*. This equipment should give you many years of pleasure and faithful service but in the event that a fault occurs, the following notes for you guidance may be helpful:-

1: PLEASE RETAIN YOUR PURCHASE RECEIPT WHICH WILL BE REQUIRED FOR SERVICE DURING WARRANTY.

2: If your Sanyo equipment proves faulty during the period of guarantee, take it or send it back to the dealer who originally supplied it together with this guarantee and the proof of purchase. We have made arrangements with our approved dealers under which they will carry out inguarantee service repairs on our behalf. In this way, we hope to reduce to a minimum the amount of time you will be without your equipment.

3: If for some reason it is impossible to return the equipment to the original supplier, please contact our Service Department at the address below for further advice.

4: Should the equipment require servicing after the expiry of the guarantee period, take or send it to the original supplier or any other Sanyo dealer. He will be pleased to give you a quotation for the repair.

Service Departments,
Sanyo U.K. Sales Ltd.,
Sanyo House,
Otterspool Way,
Watford, Hertfordshire WD2 8JX
Tel: 01923 246363

Part No. 1AA6P1P1420-- F3JM/PM/SM

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